FIG. 1A

ATGGCCCAAG CCCTGCCCTG GCTCCTGCTG TGGATGGGCG CGGGAGTGCT

GCCTGCCCAC GGCACCCAGC ACGGCATCCG GCTGCCCCTG CGCAGCGGCC

TGGGGGGCGC CCCCCTGGGG CTGCGGCTGC CCCGGGAGAC CGACGAAGAG

CCCGAGGAGC CCGGCCGGAG GGGCAGCTTT GTGGAGATGG TGGACAACCT

GAGGGGCAAG TCGGGGCAGG GCTACTACGT GGAGATGACC GTGGGCAGCC

CCCCGCAGAC GCTCAACATC CTGGTGGATA CAGGCAGCAG TAACTTTGCA

GTGGGTGCTG CCCCCCACCC CTTCCTGCAT CGCTACTACC AGAGGCAGCT

GTCCAGCACA TACCGGGACC TCCGGAAGGG TGTGTATGTG CCCTACACCC

AGGGCAAGTG GGAAGGGGAG CTGGGCACCG ACCTGGTAAG CATCCCCCAT

GGCCCCAACG TCACTGTGCG TGCCAACATT GCTGCCATCA CTGAATCAGA

CAAGTTCTTC ATCAACGGCT CCAACTGGGA AGGCATCCTG GGGCTGGCCT

ATGCTGAGAT TGCCAGGCCT GACGACTCCC TGGAGCCTTT CTTTGACTCT

CTGGTAAAGC AGACCCACGT TCCCAACCTC TTCTCCCTGC AGCTTTGTGG

TGCTGGCTTC CCCCTCAACC AGTCTGAAGT GCTGGCCTCT GTCGGAGGGA

GCATGATCAT TGGAGGTATC GACCACTCGC TGTACACAGG CAGTCTCTGG

TATACACCCA TCCGGCGGGA GTGGTATTAT GAGGTGATCA TTGTGCGGGT

GGAGATCAAT GGACAGGATC TGAAAATGGA CTGCAAGGAG TACAACTATG

ACAAGAGCAT TGTGGACAGT GGCACCACCA ACCTTCGTTT GCCCAAGAAA

GTGTTTGAAG CTGCAGTCAA ATCCATCAAG GCAGCCTCCT CCACGGAGAA

GTTCCCTGAT GGTTTCTGGC TAGGAGAGCA GCTGGTGTGC TGGCAAGCAG

GCACCACCCC TTGGAACATT TTCCCAGTCA TCTCACTCTA CCTAATGGGT

GAGGTTACCA ACCAGTCCTT CCGCATCACC ATCCTTCCGC AGCAATACCT

GCGGCCAGTG GAAGATGTGG CCACGTCCCA AGACGACTGT TACAAGTTTG

FIG. 1B

CCATCTCACA GTCATCCACG GGCACTGTTA TGGGAGCTGT TATCATGGAG

GGCTTCTACG TTGTCTTTGA TCGGGCCCGA AAACGAATTG GCTTTGCTGT

CAGCGCTTGC CATGTGCACG ATGAGTTCAG GACGGCAGCG GTGGAAGGCC

CTTTTGTCAC CTTGGACATG GAAGACTGTG GCTACAACAT TCCACAGACA

GATGAGTCAA CCCTCATGAC CATAGCCTAT GTCATGGCTG CCATCTGCGC

CCTCTTCATG CTGCCACTCT GCCTCATGGT GTGTCAGTGG CGCTGCCTCC

GCTGCCTGCG CCAGCAGCAT GATGACTTTG CTGATGACAT CTCCCTGCTG

AAG

FIG. 2A

ATGGCCCCAG CGCTGCACTG GCTCCTGCTA TGGGTGGGCT CGGGAATGCT

GCCTGCCCAG GGAACCCATC TCGGCATCCG GCTGCCCCTT CGCAGCGGCC

TGGCAGGGCC ACCCCTGGGC CTGAGGCTGC CCCGGGAGAC CGACGAGGAA

TCGGAGGAGC CTGGCCGGAG AGGCAGCTTT GTGGAGATGG TGGACAACCT

GAGGGGAAAG TCCGGCCAGG GCTACTATGT GGAGATGACC GTAGGCAGCC

CCCCACAGAC GCTCAACATC CTGGTGGACA CGGGCAGTAG TAACTTTGCA

GTGGGGGCTG CCCCACACCC TTTCCTGCAT CGCTACTACC AGAGGCAGCT

GTCCAGCACA TATCGAGACC TCCGAAAGGG TGTGTATGTG CCCTACACCC

AGGGCAAGTG GGAGGGGGAA CTGGGCACCG ACCTGGTGAG CATCCCTCAT

GGCCCCAACG TCACTGTGCG TGCCAACATT GCTGCCATCA CTGAATCGGA

CAAGTTCTTC ATCAATGGTT CCAACTGGGA GGGCATCCTA GGGCTGGCCT

ATGCTGAGAT TGCCAGGCCC GACGACTCTT TGGAGCCCTT CTTTGACTCC

CTGGTGAAGC AGACCCACAT TCCCAACATC TTTTCCCTGC AGCTCTGTGG

CGCTGGCTTC CCCCTCAACC AGACCGAGGC ACTGGCCTCG GTGGGAGGGA

GCATGATCAT TGGTGGTATC GACCACTCGC TATACACGGG CAGTCTCTGG

TACACACCCA TCCGGCGGGA GTGGTATTAT GAAGTGATCA TTGTACGTGT

GGAAATCAAT GGTCAAGATC TCAAGATGGA CTGCAAGGAG TACAACTACG

ACAAGAGCAT TGTGGACAGT GGGACCACCA ACCTTCGCTT GCCCAAGAAA

GTATTTGAAG CTGCCGTCAA GTCCATCAAG GCAGCCTCCT CGACGGAGAA

GTTCCCGGAT GGCTTTTGGC TAGGGGAGCA GCTGGTGTGC TGGCAAGCAG

GCACGACCCC TTGGAACATT TTCCCAGTCA TTTCACTTTA CCTCATGGGT

GAAGTCACCA ATCAGTCCTT CCGCATCACC ATCCTTCCTC AGCAATACCT

ACGGCCGGTG GAGGACGTGG CCACGTCCCA AGACGACTGT TACAAGTTCG

CTGTCTCACA GTCATCCACG GGCACTGTTA TGGGAGCCGT CATCATGGAA

FIG. 2B

GGTTTCTATG TCGTCTTCGA TCGAGCCCGA AAGCGAATTG GCTTTGCTGT

CAGCGCTTGC CATGTGCACG ATGAGTTCAG GACGGCGGCA GTGGAAGGTC

CGTTTGTTAC GGCAGACATG GAAGACTGTG GCTACAACAT TCCCCAGACA

GATGAGTCAA CACTTATGAC CATAGCCTAT GTCATGGCGG CCATCTGCGC

CCTCTTCATG TTGCCACTCT GCCTCATGGT ATGTCAGTGG CGCTGCCTGC

GTTGCCTGCG CCACCAGCAC GATGACTTTG CTGATGACAT CTCCCTGCTC

AAG

FIG. 3A

ATGGCCCCGG CGCTGCGCTG GCTCCTGCTA TGGGTGGGCT CGGGAATGCT

GCCTGCCCAG GGAACCCATC TCGGTATCCG ACTGCCCCTT CGCAGCGGCC

TGGCAGGGCC ACCCCTGGGC CTGAGGCTGC CCCGGGAGAC GGACGAGGAA

CCTGAGGAGC CTGGCCGGAG AGGCAGCTTT GTGGAGATGG TGGACAACCT

GAGGGGAAAG TCCGGCCAGG GCTACTATGT GGAGATGACC GTGGGCAGCC

CCCCACAGAC GCTCAACATC CTGGTGGACA CGGGCAGTAG TAATTTTGCA

GTGGGGGCTG CCCCACACCC TTTCCTGCAT CGATACTACC AAAGGCAGCT

GTCCAGTACA TACCGAGACC TCCGAAAGTC TGTGTATGTG CCCTACACCC

AGGGCAAGTG GGAGGGGGAA CTGGGCACTG ACCTGGTGAG CATCCCTCAT

GGCCCCAACG TCACTGTGCG TGCCAACATT GCTGCCATCA CTGAATCGGA

CAAGTTCTTC ATCAATGGTT CCAACTGGGA GGGCATCCTA GGGCTGGCCT

ATGCTGAGAT TGCCAGGCCT GACGACTCCT TGGAGCCCTT TTTTGACTCC

CTGGTGAAGC AGACCCACAT TCCGAACATC TTTTCCCTGC AGCTCTGTGG

CGCTGGCTTC CCCCTCAACC AGACTGAGGC ACTGGCCTCG GTGGGAGGGA

GCATGATCAT TGGTGGTATC GACCATTCCC TATACACTGG CAGTCTCTGG

TACACACCCA TCCGGCGGGA GTGGTATTAT GAAGTGATCA TTGTACGTGT

AGAAATCAAT GGTCAAGATC TGAAAATGGA CTGCAAGGAG TACAACTATG

ACAAGAGCAT CGTGGACAGT GGCACCACCA ACCTTCGTTT GCCCAAGAAA

GTATTTGAAG CTGCAGTCAA GTCCATCAAG GCAGCCTCCT CGACGGAGAA

GTTCCCGGAT GGCTTTTGGC TAGGGGAGCA GCTGGTGTGC TGGCAAGCAG

GCACGACCCC TTGGAACATT TTCCCAGTCA TTTCACTTTA CCTCATGGGT

GAAGTCACCA ATCAGTCCTT CCGCATCACC ATCCTTCCTC AGCAATACCT

ACGGCCAGTG GAAGATGTGG CCACGTCCCA AGACGACTGT TACAAGTTCG

FIG. 3B

CCGTCTCACA GTCATCCACA GGCACCGTTA TGGGAGCGGT CATCATGGAA

GGCTTCTATG TGGTCTTTGA TCGAGCCCGA AAGCGAATTG GCTTTGCTGT

CAGCGCTTGC CATGTGCACG ATGAGTTCAG GACGGCGGCA GTGGAAGGTC

CGTTTGTCAC GGCAGACATG GAAGACTGTG GCTACAACAT TCCACAGACA

GATGAGTCAA CACTTATGAC CATAGCCTAT GTCATGGCTG CCATCTGCGC

CCTCTTCATG TTGCCACTCT GCCTCATGGT ATGTCAGTGG CGCTGCCTAC

GCTGCCTGCG CCATCAGCAT GATGACTTTG CTGATGACAT CTCCCTGCTG

AAA

FIG. 4

MAQALPWLLL WMGAGVLPAH GTQHGIRLPL RSGLGGAPLG LRLPRETDEE

PEEPGRRGSF VEMVDNLRGK SGQGYYVEMT VGSPPQTLNI LVDTGSSNFA

VGAAPHPFLH RYYQRQLSST YRDLRKGVYV PYTQGKWEGE LGTDLVSIPH

GPNVTVRANI AAITESDKFF INGSNWEGIL GLAYAEIARP DDSLEPFFDS

LVKQTHVPNL FSLQLCGAGF PLNQSEVLAS VGGSMIIGGI DHSLYTGSLW

YTPIRREWYY EVIIVRVEIN GQDLKMDCKE YNYDKSIVDS GTTNLRLPKK

VFEAAVKSIK AASSTEKFPD GFWLGEQLVC WQAGTTPWNI FPVISLYLMG

EVTNQSFRIT ILPQQYLRPV EDVATSQDDC YKFAISQSST GTVMGAVIME

GFYVVFDRAR KRIGFAVSAC HVHDEFRTAA VEGPFVTLDM EDCGYNIPQT

DESTLMTIAY VMAAICALFM LPLCLMVCQW RCLRCLRQQH DDFADDISLL

K

FIG. 5

MAPALHWLLL WVGSGMLPAQ GTHLGIRLPL RSGLAGPPLG LRLPRETDEE

SEEPGRRGSF VEMVDNLRGK SGQGYYVEMT VGSPPQTLNI LVDTGSSNFA

VGAAPHPFLH RYYQRQLSST YRDLRKGVYV PYTQGKWEGE LGTDLVSIPH

GPNVTVRANI AAITESDKFF INGSNWEGIL GLAYAEIARP DDSLEPFFDS

LVKQTHIPNI FSLQLCGAGF PLNQTEALAS VGGSMIIGGI DHSLYTGSLW

YTPIRREWYY EVIIVRVEIN GQDLKMDCKE YNYDKSIVDS GTTNLRLPKK

VFEAAVKSIK AASSTEKFPD GFWLGEQLVC WQAGTTPWNI FPVISLYLMG

EVTNQSFRIT ILPQQYLRPV EDVATSQDDC YKFAVSQSST GTVMGAVIME

GFYVVFDRAR KRIGFAVSAC HVHDEFRTAA VEGPFVTADM EDCGYNIPQT

DESTLMTIAY VMAAICALFM LPLCLMVCQW RCLRCLRHQH DDFADDISLL

K

FIG. 6

MAPALRWLLL WVGSGMLPAQ GTHLGIRLPL RSGLAGPPLG LRLPRETDEE

PEEPGRRGSF VEMVDNLRGK SGQGYYVEMT VGSPPQTLNI LVDTGSSNFA

VGAAPHPFLH RYYQRQLSST YRDLRKSVYV PYTQGKWEGE LGTDLVSIPH

GPNVTVRANI AAITESDKFF INGSNWEGIL GLAYAEIARP DDSLEPFFDS

LVKQTHIPNI FSLQLCGAGF PLNQTEALAS VGGSMIIGGI DHSLYTGSLW

YTPIRREWYY EVIIVRVEIN GQDLKMDCKE YNYDKSIVDS GTTNLRLPKK

VFEAAVKSIK AASSTEKFPD GFWLGEQLVC WQAGTTPWNI FPVISLYLMG

EVTNQSFRIT ILPQQYLRPV EDVATSQDDC YKFAVSQSST GTVMGAVIME

GFYVVFDRAR KRIGFAVSAC HVHDEFRTAA VEGPFVTADM EDCGYNIPQT

DESTLMTIAY VMAAICALFM LPLCLMVCQW RCLRCLRHQH DDFADDISLL

K

FIG. 7

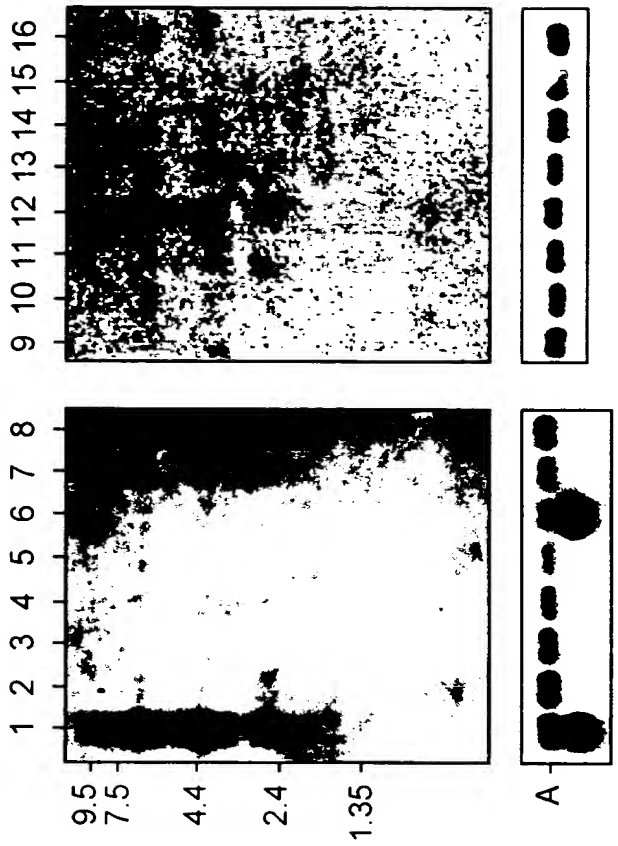


FIG. 8

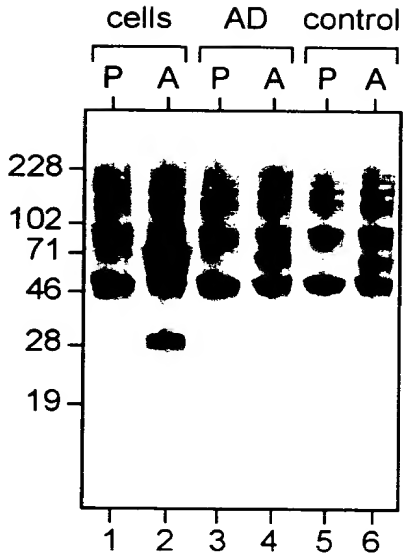


FIG. 9A

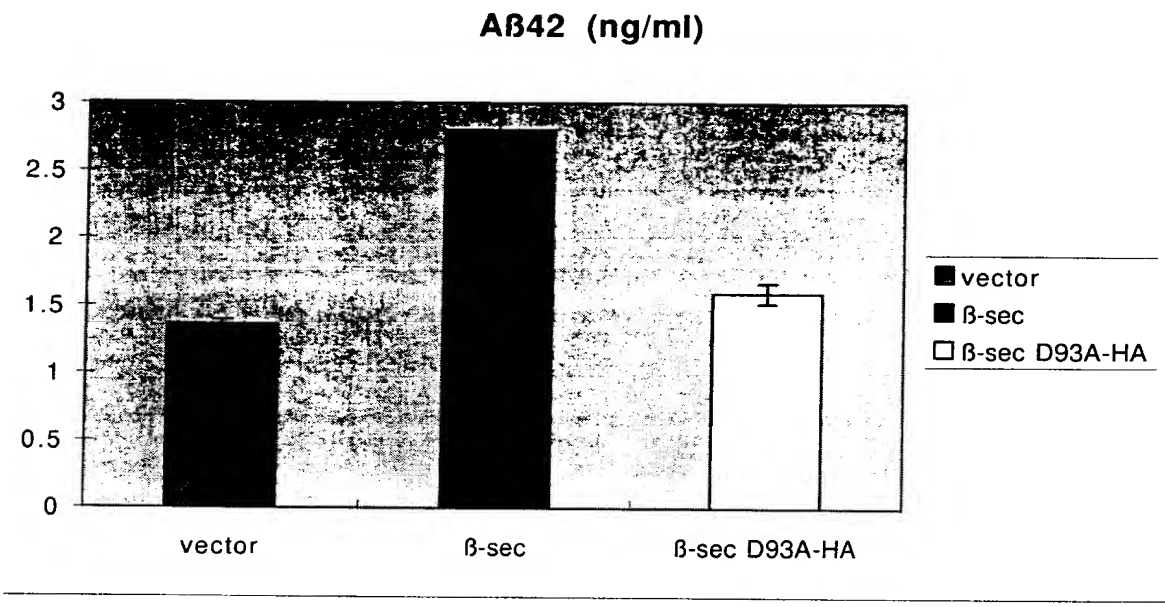
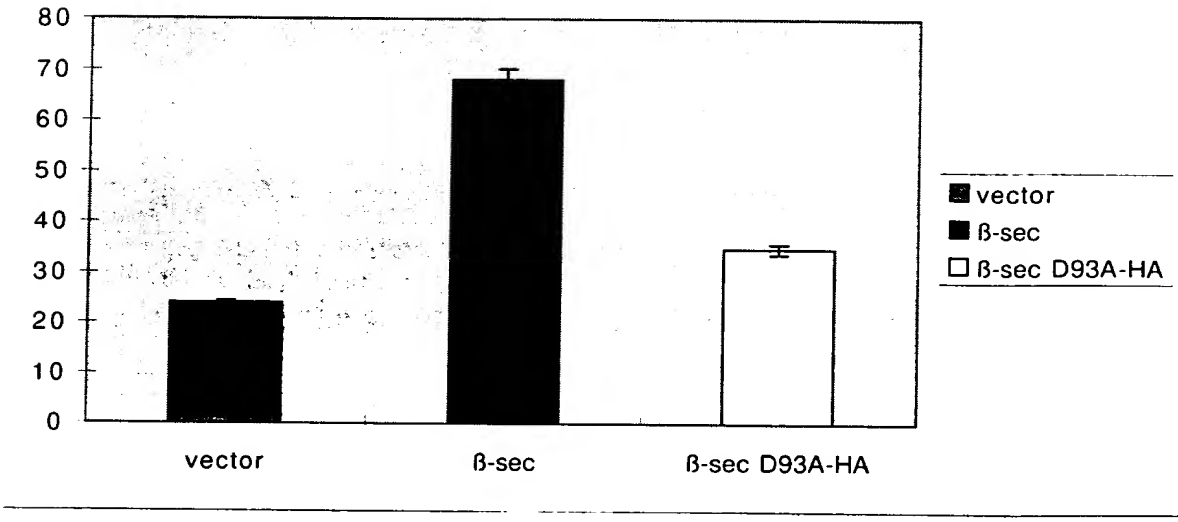

Aß42 (ng/ml)
3
2.5
2
1.5
1
0.5
0
vector
ß-sec
ß-sec D93A-HA
vector
ß-sec
ß-sec D93A-HA

FIG. 9B


Aß40 (ng/ml)
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70
60
50
40
30
20
10
0
vector
ß-sec
ß-sec D93A-HA
vector
ß-sec
ß-sec D93A-HA

FIG. 10

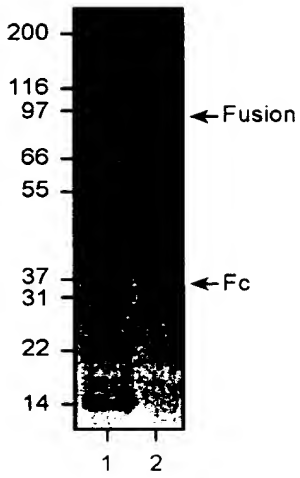


FIG. 11

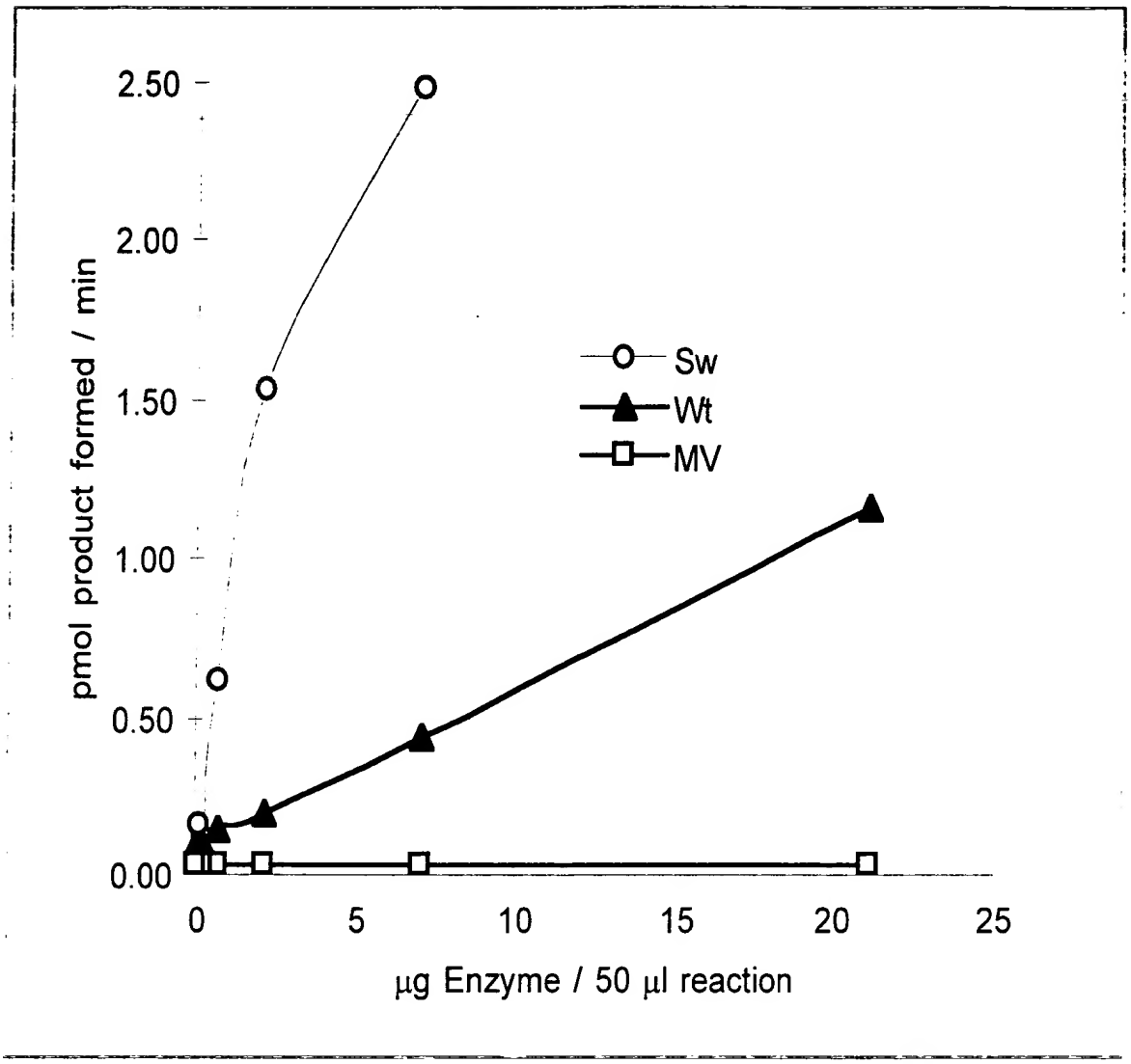
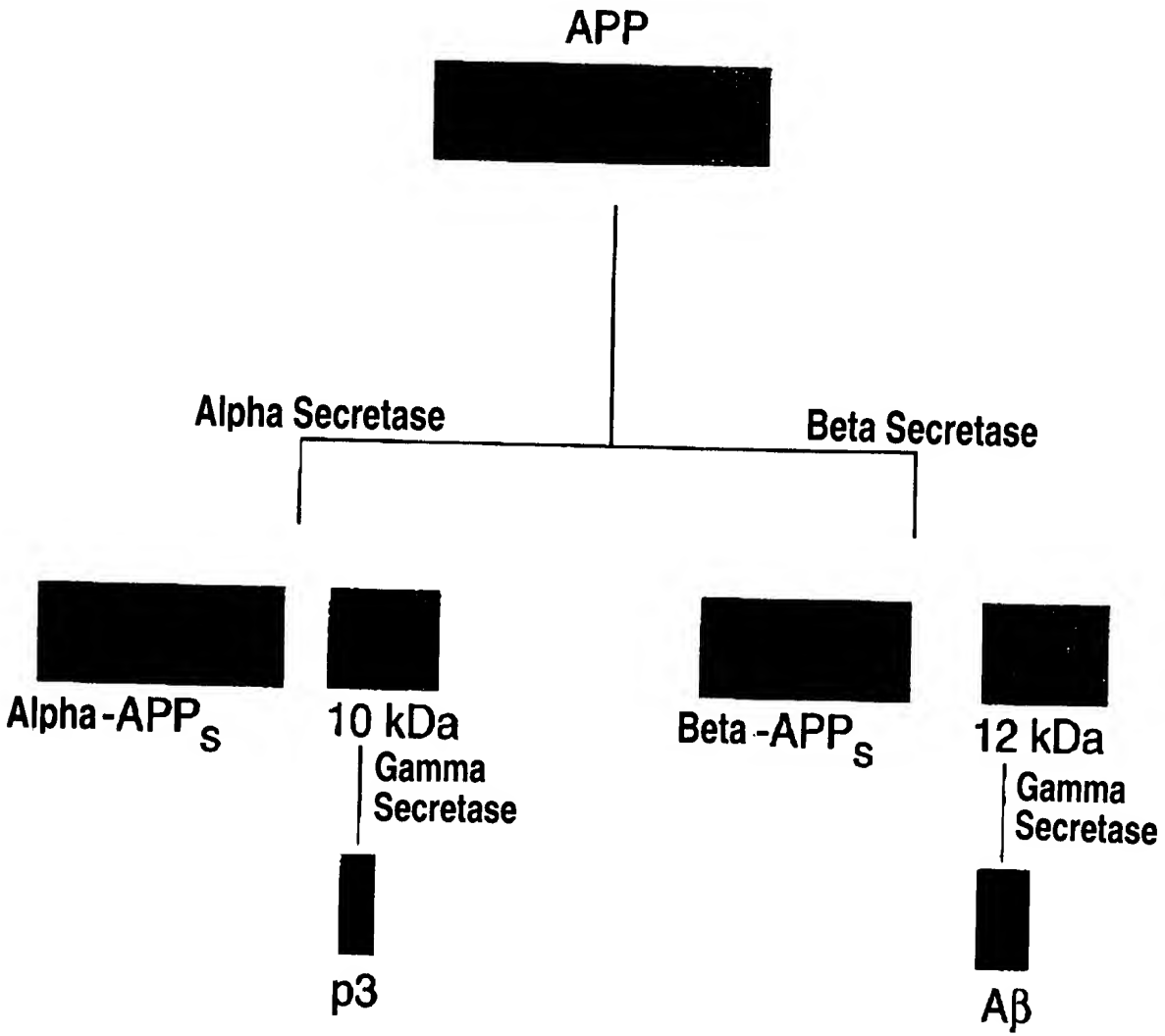

2.50
2.00
1.50
1.00
0.50
0.00
pmol product formed / min
Sw
Wt
MV
0
5
10
15
20
25
µg Enzyme / 50 µl reaction

FIG. 12



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